

**IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

ARLINGTON INDUSTRIES, INC.,

Plaintiff,

v.

CIVIL ACTION No. 3:06-CV-1105

(JUDGE CAPUTO)

BRIDGEPORT FITTINGS, INC.,

Defendant.

**MEMORANDUM**

Presently before the Court are three (3) of Defendant Bridgeport Fittings, Inc.'s ("Bridgeport") motions for summary judgment. (Docs. 110, 112, 113.) On January 14, 2008, Defendant Bridgeport filed four (4) motions for summary judgment, three (3) of which concern the '050 Patent. Defendant requests summary judgment as to non-infringement of the '831 Patent and the '050 Patent (Doc. 110), summary judgment as to non-willfulness as to the '831 Patent and the '050 Patent (Doc. 112), and summary judgment regarding damages as to the '831 Patent and the '050 Patent. (Doc. 113.) In this Memorandum, the Court will only consider the motions with respect to the '050 Patent based upon the previously ordered stay of the '831 Patent June 27, 2008. (Doc. 257.) Because Plaintiff cannot prove infringement either literally or through the Doctrine of Equivalents, Defendant's motion for summary judgment on non-infringement of the '050 Patent will be granted. As the summary judgment motion for non-infringement will be granted, Defendant's motion for summary judgment on the grounds of non-willfulness and damages as to the '050 Patent will also be granted.

The Court has jurisdiction over this matter pursuant to 28 U.S.C. § 1331 ("federal question").

## BACKGROUND

Briefly, Plaintiff Arlington and Defendant Bridgeport are competitors in the field of electrical connectors. (Def.'s Statement of Material Facts in Support of Mot. For Summ. J. ¶ 49, Doc. 114; Pl.'s Res. To Pl.'s Statement of Material Facts ¶ 49, Doc. 154.) This litigation involves the patents of two (2) of these electrical connectors. The first patent, and the patent currently at issue in the summary judgment motions, is U.S. Patent No. 5,266,050 ("the '050 Patent"), which was issued to Messrs. O'Neill, Gretz, and Stark on November 30, 1993. (Doc. 114 ¶ 1; Doc. 154 ¶ 1.) The '050 Patent is entitled "Quick-Connect Fitting for Electrical Junction Box." (Second Am. Compl. Ex. B, Doc. 102.) The '050 Patent is for an invention which relates to connectors for electrical junction boxes, specifically to an improved connector that can be easily attached to an anchored junction box by pushing with one hand. (*Id.*) Plaintiff Arlington alleges that Defendant Bridgeport has infringed Claim 8 of the '050 Patent. (Doc. 114 ¶ 3; Doc. 154 ¶ 3.) Claim 8 provides:

A quick connect fitting for an electrical junction box comprising:

a hollow electrical connector through which an electrical conductor may be inserted having a leading end thereof for insertion in a hole in an electrical junction box;

a circular spring metal adaptor surrounding said leading end of said electrical connector which has a leading end, a trailing end, and an intermediate body;

at least two outwardly sprung members carried by said metal adaptor near said trailing end of said adaptor which engage the side walls of the hole in the junction box into which said adaptor is inserted;

at least two spring locking members carried by said metal adaptor that spring inward to a retracted position to permit

said adaptor and locking members to be inserted in a hole in an electrical junction box and spring outward to lock said electrical connector from being withdrawn through the hole; and

an arrangement on said connector for limiting the distance said connector can be inserted into the hole in the junction box.

(Second Am. Compl. Ex. B, Doc. 102.)

There are numerous features involved in the patent, but one of the main features at issue are the use of connectors. (Doc. 114 ¶ 4; Doc. 154 ¶ 4.) These connectors are duplex connectors. (Doc. 114 ¶ 4; Doc. 154 ¶ 4.)

The Court issued its claim construction ruling construing certain terms at issue in the '050 Patent and the '831 Patent on December 4, 2007. (Doc. 114 ¶ 5; Doc. 154 ¶ 5; Mem. & Order, Dec. 4, 2007, Doc. 98.) One of the terms at issue in Claim 8 of the '050 Patent is a "spring metal adaptor." (Doc. 114 ¶ 6; Doc. 154 ¶ 6.) The Court construed this term to mean "a split ring or split spring metal adaptor so as to allow the diameter to easily change." (Doc. 114 ¶ 7; Doc. 98 at 32.)

Defendant Bridgeport states that its products are not split, as per the expert report of J. Brian P. Williamson. (Doc. 119 Ex. 2 ¶ 32.) Bridgeport further states that the adaptors formed of a continuous piece of metal with no gap that would permit the diameter of the adaptor to easily change. (Doc. 114 ¶ 8.) Bridgeport also states that its products do not have an opening in their circumference that passes through them from side to side. (*Id.*) Plaintiff Arlington disputes Bridgeport's characterization of its products and Bridgeport's characterization of the Court's construction of the patent. (Doc. 154 ¶ 8.) Plaintiff Arlington states that Bridgeport's adaptors are split. (*Id.*) Plaintiff states that

the adaptors are split in eight (8) places. (*Id.*) Specifically, Plaintiff references the testimony of Mr. Kenneth Kiely, Bridgeport's Engineering Manager, for the proposition that the products are indeed split in order to permit the diameter to easily change. (*Id.*)

Defendant Bridgeport further states that Plaintiff Arlington's expert, Dr. Christopher D. Rahn admitted that Bridgeport's products do not have a split, and "at the very front of the accused product, if you take a cross-section there, there will be a ring that has no gaps in it." (Doc. 114 ¶ 9; Doc. 119 Ex. 3 at 210; Doc. 119 Ex. 4 at 92.) Defendant further states that Dr. Rahn conceded that if the "spring metal adaptor" required a split, Bridgeport's products would not infringe. (Doc. 114 ¶ 9.) Plaintiff Arlington disputes this characterization of Dr. Rahn's testimony. (Doc. 154 ¶ 9.) Specifically, Arlington points to Dr. Rahn's expert report, which states that the "adaptor is split along the entire length of the adaptor that surrounds the leading end of the connector . . . Upon insertion the ring contracts at the split." (Doc. 154 ¶ 9; Doc. 119 Ex. 4 at 18-19.) Thus, the parties disagree over whether the construction requires a complete split in the ring. Defendant Bridgeton also states that because they have a non-split adaptor ring, its products do not achieve springiness by opening and closing an opening in their circumference. (Doc. 114 ¶ 10.) Plaintiff also disputes this statement, and notes that Mr. Auray, Bridgeport's Rule 30(b)(6) witness, as well as Arlington's expert witness, Dr. Rahn, testified that there was springiness in the adaptor ring. (Doc. 154 ¶ 110.)

In its December 4, 2007 Memorandum and Order, the Court also construed the language regarding the "spring steel adaptor." (Doc. 114 ¶ 11; Doc 98 at 34.) The Court construed the disputed language to mean that "[t]he adaptor is spring steel which is a split ring which in turn permits the diameter of the adaptor to be easily changed. It

contains outwardly extending tangs which extend towards the outside of the adaptor.” (Doc. 98 at 34.)

The Court also construed the term “outwardly sprung members” with regard to the ‘050 Patent to mean “[r]esilient members which are toward the outside of the adaptor and positioned on the adaptor such that when inserted into the hole of the junction box, at least a portion of the members are capable of touching the side walls of the hole in a junction box near the trailing end of the adaptor.” (Doc. 114 ¶ 13; Doc. 154 ¶ 13; Doc. 98 at 33.) The term “outwardly” must relate to the adaptor, not the junction box. (Doc. 114 ¶ 13; Doc. 154 ¶ 13; Doc. 98 at 33.) In the ‘050 Patent, the “outwardly sprung members” refer explicitly to the tensioning tangs. (Doc. 114 ¶ 14; Doc. 154 ¶ 14.) Bridgeport’s products include adaptors with four (4) tensioning tangs. (Doc. 114 ¶ 15; Doc. 154 ¶ 15.)

Defendant Bridgeport states that the generally frustro-conical shape of Bridgeport’s adaptor is primarily defined by the retaining arms. (Doc. 114 ¶ 16.) However, Plaintiff states that the shape of Bridgeport’s adaptor is dictated by a smaller diameter at the leading end and a larger diameter at the trailing end of the connector. (Doc. 154 ¶ 16.) Plaintiff further states that the small diameter is less than the diameter of the junction box for easy insertion into the junction box hole. (*Id.*) The other end of the adaptor has a larger diameter than the junction box hole so as to lock the connector and place and creating grounding when compressed into the hole. (*Id.*)

Bridgeport further states that the four (4) tensioning tangs on its adaptor are not outward relative to the conical adaptor, but are on precisely the same plane as the retaining arms. (Doc. 114 ¶ 17.) Plaintiff disputes this characterization, and states that the tangs are outward relative to the conical adaptor. (Doc. 154 ¶ 17.) Plaintiff notes that

the Court's December 4, 2007 Memorandum states that "outwardly" means 'toward the outside of the adaptor.' " (*Id.*; Doc. 98 at 20.) Plaintiff states that Bridgeport's tensioning tangs are towards the outside of the adaptor, and are fully assembled connectors with the adaptors placed on the connector body. (Doc. 154 ¶ 17.) Plaintiff cites the opinion of its expert, Dr. Rahn, for the proposition that the diameter of Defendant's outwardly sprung members at the trailing end of the adaptor are wider than the diameter of the knockout hole. (*Id.*; Doc. 119 Ex.10 a 14-21.) Plaintiff further cites testimony of one of the inventors of the '050 Patent, Daniel O'Neil, and Mr. Kenneth Kiely, Bridgeport's Engineering Manager, to show that the tensioning tangs are outward, or at least have not been tested to verify whether the tangs were in the same plane as the retaining arms. (Doc. 154 ¶ 17.)

Bridgeport states that its U.S. Patent No. 6,916,988 ("the '988 Patent") explains that "the locking tangs 22 are outwardly cantileverly bent or displaced relative to the surface of the ring at a slightly greater outwardly angle or slope than the adjacent ground tangs 23 and the slop of arms AA." (Doc. 114 ¶ 18; Doc. 119 Ex. 6. at 7.) Therefore, Bridgeport concludes that the tensioning tangs help to define the main body of the adaptor. (Doc. 114 ¶ 18.) However, Plaintiff states that the language of the '988 Patent is not proof of the structure and function of the allegedly infringing products. (Doc. 154 ¶ 18.) Plaintiff also states that the design of the allegedly infringing products has been described differently than the products in the '988 Patent, as described by Mr. Kiely, Bridgeport's Engineering Manager, in his deposition. (Doc. 154 ¶ 18; Kiel Tr. 88:17-89:3, November 13, 2007, Doc. 171.)

In distinguishing the connectors, Bridgeport cites the prosecution history of the parent to the '050 Patent, the '164 Patent. (Doc. 114 ¶ 22.) Specifically, Bridgeport states that Arlington narrowed the term "spring metal adaptor" to require a split ring to distinguish it from prior art. (*Id.*) Bridgeport cites to the prosecution of Arlington's parent '164 Patent, and claims that the PTO examiner rejected the claims in light of U.S. Patent No. 1,725,883 ("the Recker Patent"). (Doc. 114 ¶ 23.) Bridgeport states that Arlington distinguished the '050 Patent from the Recker Patent on the basis that the Recker Patent required a "complete undivided circle so that there can be no springing apart of the periphery of the tube." (*Id.*) Arlington, however, argues that these statements mischaracterize the prosecution history, and that each Claim of each patent has its own prosecution history. (Doc. 154 ¶ 22.) Arlington states that Claim 2 of the '050 Patent, dealing with the split, was not amended over the Recker Patent. (*Id.*)

U.S. Patent No. 5,363,106, which is incorporated in the '831 Patent and the '050 Patent, descend from the same parent, the '164 Patent. (Doc. 114 ¶ 24; Doc. 154 ¶ 24.) The '831 Patent application was filed on August 29, 2001, as a continuation-in-part of Application SN 09/792,185, now U.S. Patent No. 6,355,844 ("the '844 Patent"), which is in turn a continuation-in-part of Application SN 09/363,427, filed August 13, 1999, now U.S. Patent No. 6,194,661 ("the '661 Patent"). (Doc. 114 ¶ 25; Doc. 154 ¶ 25.)

Bridgeport states that in the predecessor patents, the pair of parallel openings was not directly located in the inbound end of the duplex connector, but located in an inert with a pair of parallel openings which were placed in the inbound end. (Doc. 114 ¶ 27.) However, Arlington notes that the term "directly" was not used in th predecessor patents, and that the PTO previously rejected this argument. (Doc. 154 ¶ 27.)

Claim 1 of the grandparent '661 Patent describes a duplex connector with parallel openings in the insert, and states:

A duplex electrical connector comprising:

- a) a housing having a cylindrical outbound end, a generally oval inbound end, and an interior channel linking said outbound and said inbound end; and
- b) a *generally oval insert in said generally oval inbound end and comprising a pair of parallel cylindrical apertures* having inbound and outbound sides; each of said apertures including a tubular spring steel retainer adapted to receive an armored cable into said housing. . . .

(Doc. 114 ¶ 28; Doc. 154 ¶ 28) (emphasis added). Claim 1 of parent '884 Patent describes a duplex connector, stating "*a generally oval insert in said generally oval inbound end and comprising a pair of parallel cylindrical apertures. . . .*" (Doc. 114 ¶ 29; Doc. 154 ¶ 29.)

The '884 Patent drawings show a pair of parallel openings. (Doc. 114 ¶ 37; Doc. 114 ¶ 37.) The '884 Patent specification describes the duplex connector in several places, and only describes a duplex connector with a separate insert: "The present invention provides a duplex connector comprising a housing and an insert in the housing that provides two inbound end apertures. . . ." (Doc. 114 ¶ 38; Doc. 154 ¶ 38; Doc. 119 Ex. 9 at 1.) Arlington's expert is not aware of anything in the '884 Patent or its prosecution history that discloses a connector which does not have an insert. (Doc. 114 ¶ 40; Doc. 154 ¶ 40.)

Arlington and Bridgeport were previously involved in litigation regarding the '164 Patent and the '050 Patent, in which Arlington alleged that Bridgeport connectors infringed Arlington's patents. (Doc. 114 ¶ 50; Doc. 154 ¶ 50.) This litigation settled prior

to March 2004. (Doc. 114 ¶ 50; Doc. 154 ¶ 50.) On or about March 2004, Bridgeport began developing a frustro-conical adaptor for its die cast connectors. (Doc. 114 ¶ 51; Doc. 154 ¶ 51.) On September 13, 2004, Bridgeport filed a patent application based upon the development of this adaptor. (Doc. 114 ¶ 53; Doc. 154 ¶ 53.) On July 12, 2005, the PTO issued U.S. Patent No. 6,916,988 titled “Electrical Connector With Frustro Conical Snap Fit Retaining Ring” (“the ‘988 Patent”) based upon this adaptor. (Doc. 114 ¶ 54; Doc. 154 ¶ 54.) On June 6, 2006 and December 19, 2006, the PTO issued U.S. Patent Nos. 7,057,107 (“the ‘107 Patent”) and 7,151,223 (“the ‘223 Patent”), which cites the ‘050 Patent as a reference. (Doc. 114 ¶ 55; Doc. 154 ¶ 55.)

Arlington did not mark its products with either the ‘050 Patent number or the ‘831 Patent number. (Doc. 114 ¶ 56; Doc. 154 ¶ 56.) On December 6, 2005, Arlington notified Bridgeport that the Bridgeport connectors infringed the ‘050 Patent. (Doc. 114 ¶ 58; Doc. 154 ¶ 58.)

Arlington brought this action on May 31, 2006, alleging that certain of Bridgeport’s electrical connectors infringe two (2) of Arlington’s patents: claim 1 of U.S. Patent No. 6,521,831 (“the ‘831 Patent”), and claim 8 of U.S. Patent No. 5,266,050 (“the ‘050 Patent”). On April 13, 2007, the PTO granted a request for *inter partes* reexamination of the ‘831 Patent. (Doc. 114 ¶ 62; Doc. 154 ¶ 62.)

After a *Markman* Hearing on July 6, 2007, this Court construed disputed language in these patents. (Mem. & Order, Dec. 4, 2007, Doc. 98, at 32-34.) On December 10, 2007, I granted Plaintiff leave to file a Second Amended Complaint. (Doc. 101.) The Second Amended Complaint added an allegation of willful infringement of the ‘831 Patent and a count for unclean hands. (Doc. 102.) On December 21, 2007, Defendant filed its

Answer to the Second Amended Complaint. (Doc. 103.)

On January 14, 2008, Plaintiff Arlington moved for partial summary judgment to dismiss Defendant's defense of unenforceability of the '831 Patent. (Doc. 107.) On January 14, 2008, Defendant Bridgeport filed four (4) motions for summary judgment. Currently, three (3) of these motions are before the Court. Defendant requests summary judgment as to non-infringement of the '831 Patent and the '050 Patent (Doc. 110),, summary judgment as to non-willfulness as to the '831 Patent and the '050 Patent (Doc. 112), and summary judgement regarding damages as to the '831 Patent and the '050 Patent. (Doc. 113.) On June 27, 2008, the Court granted in part and denied in part Plaintiff Arlington's motion to stay, staying the issues on the '831 Patent. (Doc. 257.) Therefore, the Court will only consider the issues surrounding the '050 Patent.

These motions are fully briefed and ripe for disposition.

### **LEGAL STANDARD**

Summary judgment is appropriate if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." FED. R. CIV. P. 56(c). A fact is material if proof of its existence or nonexistence might affect the outcome of the suit under the applicable substantive law. See *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

Where there is no material fact in dispute, the moving party need only establish that it is entitled to judgment as a matter of law. Where, however, there is a disputed

issue of material fact, summary judgment is appropriate only if the factual dispute is not a genuine one. See *id.* at 248. An issue of material fact is genuine if “a reasonable jury could return a verdict for the nonmoving party.” *Id.*

Where there is a material fact in dispute, the moving party has the initial burden of proving that: (1) there is no genuine issue of material fact; and (2) the moving party is entitled to judgment as a matter of law. See CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE: CIVIL 2D § 2727 (2d ed. 1983). The moving party may present its own evidence or, where the nonmoving party has the burden of proof, simply point out to the Court that “the nonmoving party has failed to make a sufficient showing of an essential element of her case.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

All doubts as to the existence of a genuine issue of material fact must be resolved against the moving party, and the entire record must be examined in the light most favorable to the nonmoving party. See *White v. Westinghouse Elec. Co.*, 862 F.2d 56, 59 (3d Cir. 1988). Once the moving party has satisfied its initial burden, the burden shifts to the nonmoving party to either present affirmative evidence supporting its version of the material facts or to refute the moving party’s contention that the facts entitle it to judgment as a matter of law. See *Anderson*, 477 U.S. at 256-57.

The Court need not accept mere conclusory allegations, whether they are made in the complaint or a sworn statement. *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 888 (1990). In deciding a motion for summary judgment, “the judge’s function is not himself to weigh the evidence and determine the truth of the matter but to determine whether

there is a genuine issue for trial.” *Anderson*, 477 U.S. at 249.

## DISCUSSION

### I. Infringement

“A determination of infringement requires a two-step analysis. First, the court construes the asserted claims in order to determine their proper meaning and scope.” *Union Carbide Chemicals & Plastics Technology Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1176-77 (Fed. Cir. ,2002) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996)). “After the court construes the claims, these claims are compared to the accused device.” *Id.* (citing *Bell Atl. Network Servs. v. Commc’n Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001)). Claim construction is a question of law for the court, whereas the determination of infringement is a question of fact. *Id.* Whether the product infringes the construed claims literally, or under the doctrine of equivalents, is a question of fact. *Desper Prods., Inc. v. Qsound Labs, Inc.*, 157 F.3d 1325 (Fed. Cir. 1998). However, the construction of the claims may resolve some or all of the infringement issues. *Netwood, LLC v. Centraal Corp.*, 242 F.3d 1347, 1351 (Fed. Cir. 2001) (citing *Vivide Tech., Inc. v. American Science & Engineering, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

In order to establish infringement, “every limitation set forth in the patent claim must be found in an accused product or process exactly or by a substantial equivalent.” *Laitram Corp. v. Rexnord, Inc.*, 939 F2d 1533, 1535 (Fed. Cir. 1991) (citing *Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1259 (Fed. Cir. 1989)).

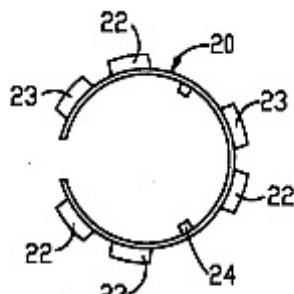
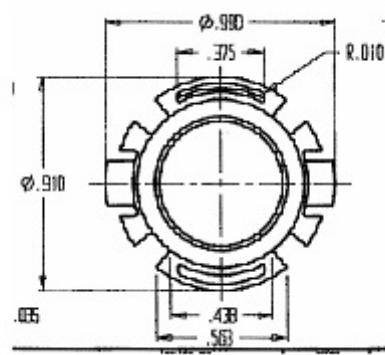
## A. Literal Infringement

For a finding of literal infringement, each limitation of the claim must be present in the accused device. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1330 (Fed. Cir. 2001). Defendant Bridgeport argues that its products do not literally have at least the following three (3) limitations: (1) a “spring metal adaptor,” (2) “outwardly sprung members,” and (3) “tubular spring steel cable retainers.”

### 1. The ‘050 Patent

Claim 8 of the ‘050 Patent requires a “spring metal adaptor.” Subsequent to the *Markman* hearing, on December 4, 2007 the Court construed this term to mean “[a]n adaptor which is circular or round and has circular cross sections. A spring metal adaptor is a split ring or split spring metal adaptor so as to allow the diameter to easily change.” (Doc. 98 at 32.)

Defendant Bridgeport argues that the split ring described in the Court’s claim construction requires an opening in its circumference that passes from side to side, or in other words, is completely split. Plaintiff Arlington, however, asserts that the term split ring simply requires that the diameter of the adaptor be easily changed, and does not require a “complete split.” Arlington argues that the portion of the ring on the Bridgeport connector body is actually split, and the portion that is “unsplit” is off of the connector body on the leading end. Arlington bases its definition of a “split” ring on the presence of metal prongs attached to the leading edge of the Bridgeport adaptor. Arlington asserts that because there is a gap between these prongs, the gap between those prongs creates a “partial split” which fits the definition of a “split” ring.

**FIG. 2**

Arlington's spring metal adaptor from the '050 Patent (Compl. Ex. B. at 2.)

Bridgeport's spring metal adaptor from an allegedly infringing product.

In viewing Bridgeport's adaptor, the adaptor is a piece of continuous metal with no gaps. The metal of the adaptor on the leading end creates a complete circle. The argument that the Bridgeport adaptor is split up to the point of the leading end of the adaptor does not create a "split" in the adaptor. In the Court's construction, the Court requires that there be a "split" ring. A ring that is split partway does not fit the construction requirement of "split," because the term "partial" would modify the term "split." Arlington argues that "[t]he Bridgeport Adaptors Are Split the Entire Length Of The Adaptor *Except At the Leading Edge.*" (Doc. 150 at 9) (emphasis added). The claim construction does not state that the adaptor must be split up until the leading end. Nor does the claim construction state that the adaptor may be split except at the leading end. Rather, the claim construction states that the adaptor must be "split." Essentially, Plaintiff Arlington is requesting that the Court modify its claim construction at the stage of summary judgment.

As Bridgeport's adaptor is not "split" as required by this Court's claim construction, there can be no claim for literal infringement. The failure to meet a single limitation is sufficient to negate literal infringement of a claim. *Laitram*, 939 F.2d at 1535. In the instant case, because the accused product does not meet the claim limitation of a "spring metal adaptor," the Court holds as a matter of law that there is no literal infringement, and needs not consider literal infringement of the other claim limitations. The Court will therefore consider whether there may be infringement of the '050 Patent under the doctrine of equivalents.

#### **B. Doctrine of Equivalents**

"Infringement under the doctrine of equivalents requires that the accused product contain each limitation of the claim or its equivalent." *Eagle Comtronics, Inc. v. Arrow Comm'cn Lab., Inc.*, 305 F.3d 1303, 1315 (Fed. Cir. 2002).

A finding of infringement under the doctrine of equivalents requires a showing that the difference between the claimed invention and the accused product or method was insubstantial or that the accused product or method performs the substantially same function in substantially the same way with substantially the same result as each claim limitation of the patented product or method.

*AquaTex Indus., Inc. v. Techniche Solutions*, 479 F.3d 1320, 1326 (Fed. Cir. 2007).

Therefore, the key issue is whether the differences between the two products are "insubstantial" to one of ordinary skill in the art. *Eagle Comtronics*, 305 F.3d at 1315. When an element in the "accused subject matter performs substantially the same function as the claimed limitation in substantially the same way to achieve substantially the same result [such a finding] may be relevant to [the] determination [of equivalence]."

*Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). “To be a[n] . . . ‘equivalent,’ the element substituted in the accused device for the element set forth in the claim must not be such as would substantially change the way in which the function of the claimed invention is performed.” *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987).

The accused product must contain every limitation, or its equivalent, for a finding of infringement under the Doctrine of Equivalents. *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 398 (Fed. Cir. 1994). But, there is no requirement for “one-to-one correspondence between the components of the accused device and the claimed invention.” *Id.* (citing *Intel Corp. v. Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991)). Infringement may occur if a “combination of its components performs a function performed by a single element in the patented invention.” *Id.* Similarly, the Doctrine of Equivalents may apply when separate claim limitations are combined into one component in the accused device. *Id.*

Limitations exist to the application of the Doctrine of Equivalents aside from the question of insubstantiality of differences. Defendant Bridgeport argues that Plaintiff may not rely on the Doctrine of Equivalents for two (2) reasons. First, Defendant argues that the “All Limitations Rule” constrains Plaintiff’s use of the Doctrine of Equivalents. Second, Bridgeport argues that the prosecution history of the ‘164 Patent estops Plaintiff from the use of the Doctrine of Equivalents. The Court will consider these arguments in turn.

### **1. All Limitations Rule**

Defendant first argues that Plaintiff is constrained from the use of the Doctrine of Equivalents because of the applicability of the All Limitations Rule. The All Limitations Rule has two (2) primary implications. “First, the all limitations rule requires that equivalence be assessed on a limitation-by-limitation basis, as opposed to from the perspective of the invention as a whole.” *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005). “Second, an element of an accused product or process is not, as a matter of law, equivalent to a limitation of the claimed invention if such a finding would entirely vitiate the limitation.” *Id.* (citing *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997)). As a corollary to the All Limitations Rule, “the concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims.” *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 400 (Fed. Cir. 1994).

Defendant Bridgeport argues that the All Limitations Rule is violated by the lack of a “spring metal adaptor” as required by Claim 1 of the ‘050 Patent. Specifically, Defendant argues that because a “spring metal adaptor” requires “split ring or split spring metal adaptor so as to allow the diameter to easily change,” Plaintiff may not argue that “spring metal adaptor” includes non-split rings under the Doctrine of Equivalents. Defendant argues that a non-split ring is the antithesis of a split ring, and therefore, the lack of this element vitiates the claim limitation of a “spring metal adaptor.”

In contrast, Plaintiff Arlington argues that it is entitled to rely upon the Doctrine of Equivalents in order to meet the limitation of a “spring metal adaptor.” Plaintiff argues

that the eight (8) “partial splits” in Bridgeport’s adaptor perform substantially the same function, in substantially the same way, to achieve substantially the same result as a split ring metal adaptor. See *Honeywell Int'l, Inc. v. United States*, 70 Fed. Cl. 424, 470 (Fed. Cl. 2006) (quoting *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998)) (“When, however, an element in the ‘accused subject matter performs substantially the same function as the claimed limitation in substantially the same way to achieve substantially the same result [such findings] may be relevant to [the equivalence] determination.”). Plaintiff Arlington argues that the “nominally un-split” piece of metal on the leading end of the Bridgeport adaptor serves no real function but to hold the adaptor to the connector body.

There is no set formula for determining whether a finding of equivalence would vitiate a claim limitation, and thereby violate the all limitations rule. Rather, courts must consider the totality of the circumstances of each case and determine whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless.

*Freedman Seating*, 420 F.3d at 1359. In determining whether an accused product infringes a patent under the doctrine of equivalents, the Federal Circuit Court of Appeals instructs the Court to examine “the simplicity of the structure, the specificity and narrowness of the claim, and the foreseeability of variations at the time of filing the claim with the PTO.” *Id.* at 1360 (citing *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1425 (Fed. Cir. 1997)).

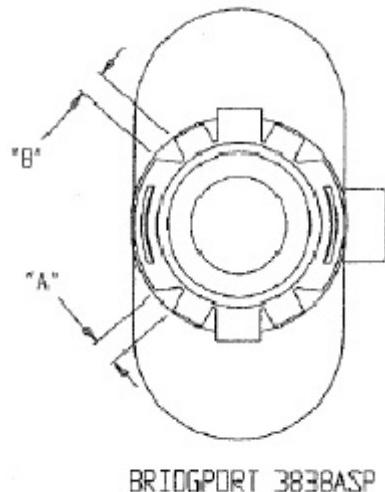
In *Sage Products*, the Federal Circuit Court of Appeals affirmed the district court’s grant of summary judgment of non-infringement under the Doctrine of Equivalents. *Sage*

Prods., 126 F.3d at 1425. In *Sage Products*, the patent involved for a container for discarding syringes. *Id.* at 1421. The description of the container claimed “an elongated slot at the top of the container body.” *Id.* at 1422. The district court interpreted the term “top of the container body” to mean “highest point, level, or part of.” *Id.* at 1423. The accused product was found to be non-infringing because the slot was located at the interior of the container, rather than at the “top of the container body.” *Id.* The court found that the “patent claims a precise arrangement of structural elements that cooperate in a particular way to achieve a certain result . . . [and Defendant] achieves a similar result - but does so by a different arrangement of elements.” *Id.* at 1425.

The Federal Circuit Court of Appeals further explained the All Limitations Rule by example. “[I]f a patent states that the claimed device must be ‘nonmetallic,’ the patentee cannot assert the patent against a metallic device on the ground that a metallic device is equivalent to a non-metallic device.” *Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1309 (Fed. Cir. 2007) (quoting *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346-47 (Fed. Cir. 2001)). “[T]he foreclosure of reliance on the doctrine of equivalents in such a case depends on whether the patent clearly excludes the asserted equivalent structure, either implicitly or explicitly.” *Id.* The court went on to held that because” the patentee had ‘clearly exclude[d]’ one of only two possible structures, ‘competitors and the public were free to draw the reasonable conclusion that the patentee was not seeking patent protection” for the excluded possible structure. *Id.*

In asserting infringement on the basis of the Doctrine of Equivalents, Plaintiff argues that the function of Bridgeport’s adaptor is the same as the “spring metal adaptor”

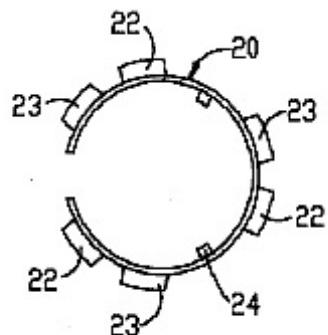
created and patented by Arlington. Plaintiff relies on the expert report of Dr. Christopher Rahn to explain the function of Arlington's spring metal adaptor. (Doc. 119 Ex. 10 at 16-19.) Dr. Rahn states that "[t]he function of the circular spring metal adaptor element is to attach the connector element to the electric box . . . Parts of the adaptor have a diameter wider than knockout hole, so that when the adaptor is inserted in the round knockout hole these resilient parts will spring inward upon insertion with a snap fit rather than with a locknut." (*Id.* at 16.) In describing Bridgeport's accused product, Dr. Rahn notes that "Bridgeport's ring is only connected at a location off of the connector body. Upon mounting, Bridgeport's adaptor expands and contracts to be held on the connector body between lugs, a/k/a shoulders, and the flange. Bridgeport's ring is made of spring metal so that the various parts that have a diameter greater than that of the knockout hole can spring inward upon insertion for a snap fit. Upon insertion the ring contracts at the split." (*Id.* at 17-18.)



Plaintiff further argues that Bridgeport's adaptors have a diameter that changes. Specifically, Plaintiff points to measurements of the Bridgeport adaptor that show a "before" and "after" after being placed into a .875 knockout. (Doc. 168 Ex. J.) Plaintiff argues that the spaces marked "A" and "B" on the diagram shown here became smaller upon insertion into the .875 knockout. (*Id.*) Essentially, Plaintiff asserts that the diameter the Court should consider is the diameter between the prongs attached to the leading end. Therefore, Plaintiff argues that as the spaces between the prongs become smaller, the

diameter of the Bridgeport adaptor changes.

However, the diameter of the ring on the leading end of the Bridgeport does not and can not change. Rather, the diameter of the ring on the leading end cannot change because there is no complete split in the metal.



**FIG. 2**

The manner in which Bridgeport adaptor's diameter changes can be compared to the change in diameter of the Arlington adaptor. In Arlington's adaptor (seen at left) (Doc. 102 Ex. B), the split runs through the entire ring, which permits the diameter of the *entire* adaptor to change upon insertion into the junction box.

The Court's construction of a spring metal adaptor was "a split ring or split spring metal adaptor so as to allow the diameter to easily change." (Doc. 98 at 32.) In this case, the All Limitations Rule bars the use of the Doctrine of Equivalents based upon the term "spring metal adaptor." The construction requires a complete split in the metal of the adaptor, which does not occur here. As stated by the Federal Circuit Court of Appeals in *Paice*, Plaintiff Arlington "clearly exclude[d] one of only two possible structures" - in this case, it clearly excluded the possibility of a ring that formed a complete circle. *Paice*, 504 F.3d at 1309. Therefore, "competitors and the public were free to draw the reasonable conclusion that the patentee was not seeking patent protection" for the excluded structure, which in this case would be an adaptor ring that forms a complete circle. *Id.*

The purpose of the split ring is to permit the diameter of the adaptor to easily

change. In this case, there is evidence that the diameter of the Bridgeport product's adaptor does not change in totality. Bridgeport adaptor's diameter does not change uniformly throughout the adaptor because of the full circle at the leading end. Although there is evidence that the diameter of the adaptor changes at the trailing end when inserted into the junction box, the diameter of the entire adaptor does not change. In contrast, the diameter of the entire Arlington adaptor changes upon insertion into the junction box. The All Limitations Rule requires that each limitation be met. Here, the limitation of a "spring metal adaptor" is not met, as there is no "split" in Bridgeport's adaptor which would allow the diameter of the entire adaptor to change.

As the claim limitation would be vitiated, the Doctrine of Equivalents is barred on this ground. Such a finding is similar to the case of a metallic versus nonmetallic product discussed in *Paice*. Whereas *Paice* stated that the All Limitations Rule would preclude a nonmetallic product from an infringement claim on a metallic product, the same holds for the spring metal adaptor. Here, there is a split metal adaptor with a diameter that changes, in contrast to an adaptor where the diameter of the entire ring does not change. In this case, the two (2) adaptors do achieve substantially the same function of being placed into the junction box. *Ethicon Endo-Surgery*, 149 F.3d at 1315. It also achieves substantially the same result. *Id.* However, the function and result is not achieved in substantially the same way. *Id.* As previously stated, the diameter of Bridgeport's adaptor does not change in its entirety, whereas the "spring metal adaptor" patented by Arlington has a diameter that changes in its entirety in order to be placed in the junction box. Like the box in *Sage Products*, the adaptor works in a different way to achieve

substantially the same result.

## **2. Prosecution History Estoppel**

Even if the Bridgeport adaptor been subject to the Doctrine of Equivalents, Plaintiff's claims would be barred by prosecution estoppel. Prosecution history estoppel may bar a patentee from relying on the doctrine of equivalents when the patentee relinquishes subject matter during the prosecution of the patent, either by amendment or argument. *Eagle Comtronics*, 305 F.3d at 1315. Prosecution history estoppel is a legal question for the court. *Martek Biosciences Corp. v. Nutrinova Inc.*, 520 F. Supp. 2d 537, 549 (D. Del. 2007) (citing *Insituform Techs. v. Cat Contracting*, 99 F.3d 1098, 1107 (Fed. Cir. 1996)). Arlington and Bridgeport were previously involved in litigation that certain Bridgeport connectors infringed two of Arlington's patents, U.S. Patent Nos. 5,171,164 ("the '164 Patent") and the '050 Patent.

Defendant argues that Plaintiff Arlington narrowed the term "spring metal adaptor" in the '050 Patent to require a split ring during the prosecution of the patent and comparison to the parent '164 Patent. Specifically, Bridgeport claims that Plaintiff distinguished its '050 Patent by explaining "[t]he shell member 16 [of the Recker Patent] is a tube that forms a *complete undivided circle* so that there can be no springing apart of the periphery of the tube as provided for in Applicants' broad claims 1 and 13. The versatility of Applicants' circular spring metal adaptor permits it to be used with a variety of connectors." (Doc. 55 Ex. 3, at 5.) Therefore, Bridgeport argues that "the patentees expressly informed the examiner - and the world - that their 'circular spring metal adaptor' was different from the Recker Patent because it was *not* a 'complete undivided circle' and

therefore permitted ‘springing apart of the periphery of the tube.’” (Doc. 115 at 19) (emphasis in original).

Defendant points to Arlington’s submission to the PTO, which discussed the claims and how it differed from the ‘164 Patent. (Doc. 55 Ex. 3.) Defendant notes that the Plaintiff’s submission states that “[t]he versatility of Applicants’ circular spring metal adaptor permits it to be used with a variety of connectors.” (*Id.* at 5.) Therefore, Defendant argues that Plaintiff surrendered non-split rings by distinguishing its product from the Recker Patent on the basis of the Recker Patent forming a complete undivided circle.

Plaintiff argues that the prosecution history of the ‘050 Patent does not read to include a split limitation. Plaintiff argues that Claim 2 of the ‘164 Patent became Claim 8 of the ‘050 Patent, and that there is no evidence that originally filed Claim 2 was amended to include a split limitation. Arlington does not dispute that Claims 1 and 13 from the ‘164 Patent were amended to include a split limitation, but states that Claim 2 did not include the reference to a split limitation.

In this regard, Arlington relies in part on Judge Conner’s analysis in the *Markman* hearings on the ‘050 Patent in a related case. (Doc. 156 Ex. Q.) See *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 2008 WL 542966, Civ. A. No. 3:01-CV-0485 (M.D. Pa. Feb. 25, 2008) (Connor, J.) Plaintiff notes that Judge Conner found no split ring limitation on the spring metal adaptor, in part based upon the prosecution history of the patents. *Id.* at \*4-5. Although Judge Conner found there to be no split ring limitation on the spring metal adaptor, this Court has construed the patent to require a split ring in its claim

construction. I must therefore consider the spring metal adaptor as it has been previously construed by this Court.

Arlington also relies on the expert report of Harry F. Manbeck, Jr., an attorney and former Commissioner of Patents and Trademarks of the United States. (Doc. 156 Ex. U.) Mr. Manbeck notes that the '050 Patent was issued from Application Serial No. 07/943,886 ("the '886 Application"), which was filed with the PTO on December 11, 1992. (*Id.* ¶ 7.) He states that this application was a continuation of Application Serial No. 07/802,368 ("the '368 Application"). (*Id.*) He states that the '368 Application was examined prior to the '886 Application, and the '164 Patent was issued from the '368 Application. (*Id.* ¶ 8.)

Arlington's expert notes that the '368 Application contained fourteen (14) claims. (*Id.* ¶ 9.) He stated that the PTO examiner in the '368 Application allowed Claims 11 and 12, rejected Claims 1, 13 and 14, and found Claims 2 through 10 to be allowable if they were written in independent form including all of the limitations of the base claim and any intervening claim. (*Id.* ¶ 10.) Claim 1, which was rejected, including language regarding a "circular spring metal adaptor." (*Id.*) Claim 2, which was allowable, stated that "[t]he quick connect fitting of claim 1 which further includes: at least two outwardly spring members carried by said metal adaptor near said trailing end of said adaptor which engage the side walls of the hole in the junction box into which said adaptor is inserted." (*Id.*) In response to the PTO, the '368 Application was amended in Claim 1 to include the language stating that the spring metal adaptor would be less than a complete circle. (*Id.* ¶ 12.) The same language was added to Claim 13. (*Id.*) Arlington's expert argues that

the changes made to Claims 1 and 13 had no relevance to Claim 2 as it stood before Claim 1 was amended. (*Id.* ¶ 14.) Rather, Claim 2 was allowable prior to the change in Claims 1 and 13. (*Id.*)

Mr. Manbeck states that the '886 Application was then filed as a continuation of the '368 Application. (*Id.* ¶ 15.) In filing the new Claims 15 to 22, the attorney filing the claims stated that Claim 22 is based on combining Claims 1 and 2, "and since the first Official Action in the parent application indicated claim 2 contained allowable subject matter if combined with the independent claim, this claim should be allowable." (*Id.* ¶ 16.) Claim 22 was then issued as Claim 8 of the '050 Patent. (*Id.* ¶ 18.)

Here, the prosecution history does reflect that Claim 2 was effected by the language stating that the spring metal adaptor would be less than a complete circle. Claim 2 specifically references the spring metal adaptor, noting that there were "at least two outwardly sprung members carried by *said metal adaptor*." (*Id.* ¶ 10) (emphasis added). The said metal adaptor referred to in Claim 2 reflects the spring metal adaptor discussed in Claim 1 - the spring metal adaptor which is formed in less than a complete circle. Therefore, the prosecution history reflects that Claim 2 is also bound by a spring metal adaptor formed of less than a complete circle.

Furthermore, as discussed in the Court's claim construction of December 4, 2007, "prior art disclosed an unsplit ring, and this prior art was distinguished by Arlington in the prosecution of the '164 Patent - i.e., that the Recker invention was a complete undivided circle that did not allow for springing apart of the periphery of the tube as provided for in the '164 Patent claims." (Doc. 98 at 17.) Therefore, Arlington may not rely on the

Doctrine of Equivalents to prove infringement of its spring metal adaptor.

The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes. When, however, the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent.

*Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 733-34 (2002). The Supreme Court noted that the purpose of prosecution history estoppel was so that an inventor would not “seek to recapture in an infringement action the very subject matter surrendered as a condition of receiving the patent.” *Id.* at 734.

Prosecution history estoppel ensures that the doctrine of equivalents remains tied to its underlying purpose. Where the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or to protect its validity, the patentee cannot assert that he lacked the words to describe the subject matter in question. The doctrine of equivalents is premised on language's inability to capture the essence of innovation, but a prior application describing the precise element at issue undercuts that premise. In that instance the prosecution history has established that the inventor turned his attention to the subject matter in question, knew the words for both the broader and narrower claim, and affirmatively chose the latter.

*Id.* at 734-35. In this case, Claim 1 was rejected in the '368 Application. In response, Arlington submitted to the PTO that the difference between its claim and the Recker Patent was that the “[t]he shell member 16 [of the Recker Patent] is a tube that forms a complete undivided circle. . . .” (Doc. 55 Ex. 3 at 5.) Arlington specifically differentiated its product from the Recker Patent in Claim 1 by discussing the difference between a

complete undivided circle and one that is divided. To allow Arlington to now claim that the spring metal adaptor need not be divided goes against the policy behind prosecution history estoppel. Arlington narrowed its claim on the spring metal adaptor to distinguish it from the Recker Patent. The precise issue before the PTO was whether the ring was a complete undivided circle. This was a distinguishing feature between the Recker Patent and Claim 1 of the '368 Patent. Claim 2 of the '368 Patent, although "allowable" by the PTO, specifically references the spring metal adaptor of Claim 1, stating that the "*said metal adaptor*" referenced in Claim 1 carried the two (2) outwardly sprung members. By referencing Claim 1, the "*said metal adaptor*" was a split ring adaptor. Both Claims 1 and 2 of the '368 Patent were then incorporated into the '886 Patent in Claim 22. Claim 22 then became Claim 2 of the '050 Patent. By combining Claims 1 and 2 to create Claim 22, which eventually became Claim 8 of the '050 Patent, the language regarding the complete undivided circle applies to Claim 8 through its prosecution history.

As the Court has determined that the accused products with respect to the '050 Patent do not satisfy the limitation of a spring metal adaptor limitation literally or under the Doctrine of Equivalents, the Court need not consider whether the accused products satisfy the limitation of "outwardly sprung members."

## **II. Non-Willfulness and Damages**

As the Court has determined that the accused products do not infringe the '050 Patent, the Defendant's motion for summary judgment regarding non-willfulness and damages will also be granted.

## CONCLUSION

Because Plaintiff cannot prove literal infringement because Bridgeport's spring metal adaptor is not "split," and because Plaintiff cannot use the Doctrine of Equivalents to prove infringement due to prosecution history estoppel, the Court will grant Defendant Bridgeport's motion for summary on non-infringement of the '050 Patent. (Doc. 110.) Furthermore, because the Court will grant Defendant's motion for non-infringement on the '050 Patent, the Court will also grant Defendant's motion for summary judgment on non-willfulness and damages on the '050 Patent. (Docs. 112 and 113.) As ordered in this Court's previous ruling on June 27, 2008 (Doc. 257), the rulings on these motions for summary judgment (Docs. 110, 111, and 112) with respect to the '831 Patent will be stayed pending the *inter partes* reexamination of the '831 Patent.

An appropriate Order follows.

September 18, 2008

Date

/s/ A. Richard Caputo

A. Richard Caputo

United States District Judge

IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

ARLINGTON INDUSTRIES, INC.,

Plaintiff,

v.

BRIDGEPORT FITTINGS, INC.,

Defendant.

CIVIL ACTION No. 3:06-CV-1105  
(JUDGE CAPUTO)

**ORDER**

Now, this 18<sup>th</sup> day of September, 2008, it is **HEREBY ORDERED** that:

- (1) Defendant Bridgeport's motion for summary judgment as to non-infringement of the '050 Patent (Doc. 110) is **GRANTED**.
- (2) Defendant Bridgeport's motion for summary judgment as to non-willfulness as the '050 Patent (Doc. 112) is **GRANTED**.
- (3) Defendant Bridgeport's motion for summary judgement regarding damages as to the '050 Patent (Doc. 113) is **GRANTED**.

/s/ A. Richard Caputo  
A. Richard Caputo  
United States District Judge